

Customer No.: 31561
Application No.: 10/604,883
Docket No.: 10766-US-PA

AMENDMENTS

To the Claims:

1. (original) A method of manufacturing a low temperature polysilicon film, comprising the steps of:

forming a first metal layer on a substrate, a plurality of openings contiguous to the substrate being formed in the first metal layer;

forming a second metal layer on the first metal layer by performing an oblique evaporation and a hole being formed in the second metal layer corresponding to each of the openings;

forming a silicon layer on the second metal layer and a silicon seed being formed on the substrate inside each of the holes;

removing the first metal layer and the second metal layer;

forming an amorphous silicon layer on the substrate by using the silicon seed for performing a deposition process; and

transforming the amorphous layer to a polysilicon layer by performing a crystallization.

2. (currently amended) The method of claim 1, wherein an angle of the oblique evaporation relative to a horizontal is in a range of about 10 degrees to 30 degrees.

3. (original) The method of claim 1, wherein the oblique evaporation is an electron beam evaporation.

Customer No.: 31561
Application No.: 10/604,883
Docket No.: 10766-US-PA

4. (original) The method of claim 1, wherein the first metal layer is a bilayer metal layer structure.

5. (original) The method of claim 4, wherein a material of the second metal layer is the same as a material of a bottom layer of the bilayer metal layer structure.

6. (original) The method of claim 5, wherein the material of both of the second metal layer and the bottom layer of the bilayer metal layer structure comprises aluminum.

7. (original) The method of claim 6, wherein the step of removing the second metal layer and the first metal layer comprises using phosphoric acid.

8. (original) The method of claim 1, wherein the step of forming the silicon seed on the substrate inside each of the holes comprises an electron beam evaporation.

9. (currently amended) The method of claim 1, wherein a diameter size of each of the silicon seed is in a range of about 0.5 μm to 1.0 μm .

10. (original) The method of claim 1, wherein the crystallization comprises a laser crystallization.

11. (original) The method of claim 1, wherein the step of forming an amorphous silicon layer comprises a chemical vapor deposition.

12. (original) A method of controlling a crystal seed position, comprising the steps of:
forming a first metal layer on a substrate wherein a plurality of openings contiguous to the substrate is formed in the first metal layer;

Customer No.: 31561
Application No.: 10/604,883
Docket No.: 10766-US-PA

forming a second metal layer on the first metal layer by performing an oblique evaporation and a plurality of holes being formed in the second metal layer corresponding to the plurality of openings;

forming a crystal seed layer on the second metal layer and a silicon seed being formed on the substrate inside each of the holes; and

removing the first metal layer and the second metal layer.

13. (currently amended) The method of claim 12, wherein an angle of the oblique evaporation relative to a horizontal is in a range of about 10 degrees to 30 degrees.

14. (original) The method of claim 12, wherein the oblique evaporation is an electron beam evaporation.

15. (original) The method of claim 12, wherein the first metal layer is a bilayer metal layer structure.

16. (currently amended) The method of claim 15+2, wherein a material of the second metal layer is the same as a material of a bottom layer of the bilayer metal layer structure.

17. (currently amended) The method of claim 15+2, wherein the material of both the second metal layer and the bottom layer of the bilayer metal layer structure comprises aluminum.

18. (original) The method of claim 12, wherein the step of removing both of the second metal layer and the first metal layer comprises using phosphoric acid.

19. (original) The method of claim 12, wherein the step of forming the silicon seed on the substrate inside each of the holes comprises an electron beam evaporation.

Customer No.: 31561
Application No.: 10/604,883
Docket No.: 10766-US-PA

20. (currently amended) The method of claim 12, wherein a diameter size of each of the silicon seed is in a range of about 0.5 μm to 1.0 μm .